



How to Improve the Practice of Blood Sampling: The Role of the Interactive and Relational Aspects to Prevent Fainting

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Dear Editor-in-Chief

Faced with specific emotional stimuli, such as fear, fright, or worry, some people may experience the so-called vasovagal syncope (SVV), a secondary reflex responsible for hypotension and bradycardia, which constitutes about 30% of syncope (1).

From an epidemiological point of view, SVV is a frequently occurring phenomenon in the general population. The prevalence of the first syncopal episode is particularly high in patients between 10 and 30 yr of age, reaching about 47% in females and 31% in males around 15 yr of age (2). This reaction is therefore particularly experienced by adolescents and young adults.

The characteristic symptoms of SVV are nausea, tremor, sweating, weakness, and vision impairment (3). Among the various activities in which SVV manifests itself there is a particularly delicate activity involving health called venous sampling. During the sampling, it is necessary to be careful because the person might faint and fall unconscious on the floor (in the context of transient loss of consciousness [T-LOC]), resulting in negative consequences.

Although this reaction occurs rapidly, is short-lived, and has spontaneous recovery, such episodes can lead to a lot of anxiety and concern in the people who experience it. Some may stop taking blood samples, compromising the need

test them which could have a potentially major impact on disease prevention.

Fainting because of sampling has been studied mainly from a medical point of view so far. The mechanisms that are physiologically activated during syncope are well understood. However, the causes responsible for SVV have not yet been clarified, although it is known that hypotension and bradycardia are associated with transient inhibition of the sympathetic system and activation of the vagal system (4).

The few psychophysical studies conducted have deepened the relationship between emotion and genetics. For example, it was found that disgust and fear can facilitate the onset of vasovagal syncope (5), while a sense of disgust towards the needle is related to needle phobia but is completely absent among people who are not afraid of the needle.

Our research stems from the need to explore the experience of people who have undergone SVV. With this this scope, we conducted an exploratory survey on a sample of 68 subjects diagnosed with pre-syncope or SVV of both sexes (28 males, 40 females), aged between 14 and 24 yr, with an average age of 22.18 yr, who underwent venous blood sampling at an outpatient clinic in Italy and reported having experienced one or more episodes of fainting. The



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study objectives concern the description of the sampling experience. Narrative interviews were used as the research methodology and were conducted at acquiring the description of the interactions within the hospital due to which the fainting could have occurred. Informed consent was taken from the patients before the study.

The narrations provided by the participants allowed us to highlight the ways in which they shape some fundamental aspects of this experience, allowing for some reflections that could be codified in guiding principles. A majority of the respondents focused on the relational and interactive aspects, considering them decisive in contributing in generating fear.

First, the hospital was represented in an unfriendly context as a detached and a cold place, which is professional but creates a lot of distance between those in need and those who care. Many interviewees spoke of it as an environment that arouses "anxiety and fear". These sensations increase during the wait when the more the time passes, the more the worry grows. This, according to several respondents, feeds the fear. In fact, some said they thought about giving up the withdrawal and some even left the hospital. The non-reception is also due to a too large an environment, a bare, aseptic and depersonalized room, which makes them feel like "a number".

Second, interactions with operators are considered crucial: the hasty attitude of the operators was considered by the patients as a sign of lack of attention or disorganization. Another aspect that was stressful is the silence by the operators in charge of the sample, which comes across as cold, detached, and unsympathetic towards the uncomfortable situation of the patient.

On the other hand, participants expressed that they would greatly appreciate an operator to speak and ask questions in everyday language, showing availability, distracting them, instilling confidence in them, and contributing in creating a serene environment.

These data confirm what Hughes et al (6) had found on the importance of welcoming patients

and making them familiar with the practices implemented in order to help them manage their worry and anxiety. All these findings brought out the need to train sampling staff to implement a more welcoming and comforting relationship and communication with patients.

We hope that these data can help improve the environment and operators' behavior to allow for a rapid change in experience of sample collection for young citizens. This will ensure their good health (7) and that of the entire community to which they belong.

Conflict of interest

The authors declare that there is no conflict of interest.

References

1. Accurso V, Winnicki M, Shamsuzzmam ASM, et al (2001). Predisposition to vasovagal syncope in subjects with blood/injury phobia. *Circulation*, 104(8):903–7.
2. Moya A, Sutton R, Ammirati F, Blanc J, Wieling W (2010). Linee guida per il trattamento della sincope. *G Ital Cardiol*, 11:94–135.
3. Verrotti A, D'Adamo E, Chiarelli F (2007). Lipotimia e sincope nell'adolescente. *Rivista Italiana di Medicina dell'Adolescenza*, 5(2):37–42.
4. Jardine DL, Melton IC, Crozier JG, et al (2002). Decrease in cardiac output and muscle sympathetic activity during vasovagal syncope. *Am J Physiol Heart Circ Physiol*, 282(5):H1804–09.
5. Page AC (2003). The role of disgust in faintness elicited by blood and injection stimuli. *J Anxiety Disord*, 17(1):45–58.
6. Hughes LD, McMurdo ME, Guthrie B (2013). Guidelines for people not for diseases: the challenges of applying UK clinical guidelines to people with multimorbidity. *Age Ageing*, 42(1):62–9.
7. Judici A (2014). Health promotion in school: theory, practice and clinical implications. *Nova Publisher*, 1–153 p.